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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/651,053

08/29/2003

James Stenberg

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03/01/2005

BAKER & HOSTETLER LLP
Washington Square, Suite 1100
1050 Connecticut Avenue, N.W.
WASHINGTON, DC 20036

EXAMINER

JONES, STEPHEN E

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,053

Applicant(s)

STENBERG, JAMES

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8, 9, 16-19, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 8, the phrases "said first input coaxial line" and "said second input coaxial line" lack antecedent basis. Should claim 8 be dependent on Claim 4?

Also regarding Claim 8, the phrase "the circular waveguide" lacks antecedent basis.

Regarding Claim 9, the phrases "said first output coaxial line" and "said second output coaxial line" lack antecedent basis. Should claim 8 be dependent on Claim 5?

Regarding Claim 16, the phrase "said high power UHF" lacks antecedent basis. Should the term "UHF" read as --RF--?

Regarding Claim 19, it is not clear what the phrase "the other signal" is referring thus rendering the claim vague and indefinite.

Regarding Claim 23, it is not clear what the phrase "the other signal" is referring thus rendering the claim vague and indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 6-7, 16, 17, 18, 19 and 20-23 (insofar as claims 16, 19 and 23 could be understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Di Tullio et al. (US 3,731,236).

Di Tullio et al. teaches a microwave polarizer/combiner including: orthogonal mode transducers (OMT) (e.g. 10, 13) which includes two waveguide inputs (11, 12) to receive two transmitted signals (i.e. drivers, see Col. 4, lines 11-21) (Claim 6); a rotator polarizer (15) (Claim 1); and the rotator is connected between the two OMT's so as to be capable of sliding (i.e. a slip connection); the connection can be considered low-VSWR especially since it is the same structure as the presently claimed invention, and "low" is a broad and relative term (Claim 2); the OMT (13) has output waveguides (Claims 7, 16); the inputs and outputs can be considered couplings for collecting the signal (Claim 20); the output path includes an antenna port which substantially all of the energy is coupled out (Claim 21); and the designation of the antenna output path as being named as a first or second output path is arbitrary (Claims 17, 18, 19 21 and 22-23).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Di Tullio et al (US 3,731,236) in view of Montgomery.

Di Tullio et al teaches a polarizer as described above. However, Di Tullio does not explicitly teach that the coupling is a choke coupling.

Montgomery provides the exemplary teaching of a choke coupling for connecting rotatable waveguides.

It would have been considered obvious to one of ordinary skill in the art to have substituted choke couplings such as taught by Montgomery in place of the generic couplings in the Di Tullio device, because it would have provided the advantageous benefit of the prevention of loss of energy and the impedance change purely reactive (e.g. see Montgomery, Col. 2, lines 36-41), thereby suggesting the obviousness of such a modification.

7. Claims 4-5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Di Tullio et al (US 3,731,236) in view of Smith et al.

Di Tullio et al teaches a polarizer as described above. However, Di Tullio does not explicitly teach that the inputs and outputs are coaxial line connections.

Smith provides the general teaching that the inputs and outputs of a polarizer can be waveguides or alternatively coaxial connections with probes.

It would have been considered obvious to one of ordinary skill in the art to have substituted coaxial lines and connections such as taught by Smith in place of the waveguide connections in the Di Tullio device, because it would have been considered

a mere substitution of well-known art-recognized equivalent/alternative signal coupling means for a polarizer device.

8. Claims 10-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Di Tullio et al (US 3,731,236) in view of Di Tullio et al. (US 4,100,514).

Di Tullio (3731236) teaches a polarizer as described above. However, the reference does not teach that the polarizer is pin-type (Claim 10); dielectric type (Claim 11); that there is a plurality of rows of pins (Claim 13); and that the device functions as detailed in claims 14-15.

Di Tullio (US 4100514) teaches a polarizer including a plurality of rows of pins. Also, Di Tullio teaches that dielectric polarizers and pin-type polarizers are well-known (e.g. see Col. 1, lines 10-17).

It would have been considered obvious to one of ordinary skill in the art to have substituted a dielectric or a pin polarizer such as taught by Di Tullio (4100514) in place of the generic polarizer in the Di Tullio (3731236) device, because it would have been considered a mere substitution of well-known art-recognized equivalent microwave polarizer means as suggested by Di Tullio ('514). As an obvious consequence of the combination the device would function equivalently to the present invention since it is the same structure as claimed.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Di Tullio et al (US 3,731,236) and Di Tullio (US 4100514) as applied to claim 10 above, and further in view of Wong et al.

Di Tullio ('236 and '514) teaches a polarizer as described above. However they do not explicitly teach a single row of pins.


Wong teaches a polarizer having a single row of pins.

It would have been considered obvious to one of ordinary skill in the art to have substituted a polarizer having a single row of pins such as taught by Wong et al. in place of the polarizer as taught in the Di Tullio combination described above, because it would have been considered a mere substitution of well-known art-recognized equivalent microwave polarizer means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


STEPHEN E. JONES
PRIMARY EXAMINER

SEJ